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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,114	09/20/2001	Andrew Bartlett	MCA-460 PC/US	4663

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EXAMINER

MENON, KRISHNAN S

ART UNIT	PAPER NUMBER
1723	S

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/937,114

Applicant(s)

BARTLETT ET AL.

Examiner

Krishnan S Menon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

Claim 2 is objected to because of the following informalities: The phrase “..along at least of its peripheral edges,..” has a numerical qualifier missing for peripheral. The examiner assumes ‘one’ for examination purposes. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 23, the word "means" is preceded by the word(s) "wherein" in an attempt to use a "means" clause to recite a claim element as a means for performing a specified function. However, since no function is specified by the word(s) preceding "means," it is impossible to determine the equivalents of the element, as required by 35 U.S.C. 112, sixth paragraph. See *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967). For examination, this is considered as ‘sealing means’.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4, 9,10,13-17,21-24 and 26 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Pearl et al (US 5,824,217).

Pearl (217) discloses a filtration device with one or more layers (fig 4) with openings in each layer (28,30-fig 4), and means for establishing leak-tight seal around each of the openings (13,15,21,25-fig 4) with thermoplastic elastomeric material (col 4 lines 12-19) as in instant claim 1 and 3. The sealing means is structures formed on the surface by molding (col 1 lines 7-11) as in instant claim 23 like a gasket or a sealing rim as in instant claims 24 and 26 (fig 2,3 and 5).

Pearl (217) teaches a feed screen with plurality of openings having molded gasket of thermoplastic polymer (col 4 lines 12-19) rim, which is thicker than the screen (64-fig 5; col 5 lines 56-65) as in instant claim 2 and 4, and formed by injection molding (col 1 lines 7-11) as in instant claim 9.

Pearl (217) teaches a filtration module comprising a membrane, a feed screen and a permeate screen, each with ports on their edges, entrance and exits for the feed and permeate streams, with the screen layers having integrally injection molded gaskets thicker than the screens and extending from both sides of the screen (fig 4, 5; col 4 lines 12-19, col 1 lines 7-11; col 5 lines 56-65) as in instant claims 10, 13 and 15. The gasket material is thermoplastic (col 4 lines 12 – 19), and polygonal in shape (fig 5) as in instant claims 14 and 17. The filter layer is of PVdF, polysulfone, etc (col 4 lines 1-5) as in instant claim 21. Sealing rims are also there on the end caps (50-fig 2) as in instant claim 22.

2. Claims 1-4,10,13,14, and 16-19 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ondrick (US 5,445,737).

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Ondrick (737) teaches a multiple layer filter cassette with membranes and filter screen in alternating layers as feed and permeate channels, the layers having holes, with rectangular gaskets of elastomeric materials separating the layers as in instant claims 1-4, 10, 14, 16 and 17 (see details in Fig 2 and 4-6; col 3 line 40 – col 4 line 25). The gaskets would serve to vary the thickness of the layers (fig 6) as in instant claim 18 and 19, the gaskets are both sides of the screen as in instant claim 13.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
1. Claims 5-8, 9, 11, 12, 15 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ondrick (737).

Ondrick (737) teaches every element of claims 5-8, 9, 11, 12, 15 and 25 as described in claims 1,2 and 10 above paragraphs, except the extension of the gasket above the screen (or its

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thickness) as in instant claim 5-8, 11 and 12, and the gaskets being injection molded or O-rings. It would be obvious to one of ordinary skill in the art at the time of invention to provide sufficient height of the gasket above the screen on both sides to provide effective seal and to have sufficient spacing between the feed/permeate channels and the membrane, which is provided by the height of the gasket, and the actual thickness would depend on the flow rate. Ondrick (737) teaches using staple elastomeric material (col 4 lines 5-10). It would be obvious to one of ordinary skill in the art at the time of invention that gasket material could be obtained in the required shape as injection molded for making them dimensionally accurate instead of cutting from staple material, or they could be O-rings because O-rings are easily available in different standard sizes.

2. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pearl (217).

Pearl (217) teaches all the elements of claim 20 with the possible exception of the operating pressure of 50 – 110 psi. It would be obvious to one of ordinary skill in the art at the time of invention to design the structural parts, particularly the end caps, to withstand the filtration pressure required to obtain the desired flow rate and overcome the osmotic pressure, etc.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kopf (US 5,342,517; US 5,034,214; US 5,593,580) teaches multi-layered filter devices similar to the instant invention.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S Menon whose telephone number is 703-305-5999. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L Walker can be reached on 703-308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Krishnan S. Menon  
Patent Examiner  
November 14, 2002

  
W. L. WALKER  
SUPERVISORY PATENT EXAMINER  
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